

Listing of Pending Claims

1. (Currently Amended) A device for generating a plurality of electron beams comprising:
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- a) a source of radiation;
 - b) a spatial light modulator having a position so as to modulate said radiation emanating from said source of radiation and being configured to alter radiation modulation characteristics thereof in response to computer control; and
 - c) a photocathode having a position so as to receive said modulated radiation wherein said photocathode simultaneously produces a plurality of electron beams under impact by said modulated radiation as result of said modulation of the radiation by the spatial light modulator, said modulation of the radiation by the spatial light modulator controls the pattern of electron beams emitted by the photocathode.

2. (Original) A device as in claim 1 wherein said radiation is uv radiation.
3. (Original) A device as in claim 2 wherein said source of radiation is a mercury arc lamp.
4. (Original) A device as in claim 3 wherein said photocathode is cesium telluride.
5. (Canceled)
6. (Previously Amended) An device as in claim 1 wherein said spatial light modulator is a micromirror array.

7. (Currently Amended) An electron beam lithography system comprising:
- a) a source of radiation;
 - b) a spatial light modulator having a position so as to modulate said radiation emanating from said source of radiation and being configured to alter radiation modulation characteristics thereof in response to computer control;
 - c) a photocathode having a position so as to receive said modulated radiation wherein said photocathode simultaneously produces a plurality of electron beams under impact by said modulated radiation as result of said modulation of the radiation by the spatial light modulator and said modulation of the radiation by the spatial light modulator controls the pattern of electron beams emitted by the photocathode; and
 - d) an electron beam optical column having a position so as to receive said plurality of electron beams and to direct said plurality of electron beams onto a target.

8. (Original) A system as in claim 7 wherein said radiation is uv radiation.

9. (Original) A system as in claim 8 wherein said source of radiation is a mercury arc lamp.

10. (Original) A system as in claim 9 wherein said photocathode is cesium telluride.

11. (Canceled)

12. (Previously Amended) A system as in claim 7 wherein said spatial light modulator is a micromirror array.

13. (Currently Amended) A method of producing a plurality of electron beams comprising:

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- a) directing radiation onto a spatial light modulator, thereby modulating said radiation, the spatial light modulator being configured to alter radiation modulation characteristics thereof in response to computer control; and
 - b) directing said modulated radiation onto a photocathode thereby simultaneously producing a plurality of electron beams as result of said modulation of the radiation by the spatial light modulator, said computer-controlled modulation of the radiation by the spatial light modulator controls the pattern of electron beams emitted by the photocathode.

14. (Original) A method as in claim 13 wherein said radiation is uv radiation.

15. (Original) A method as in claim 14 wherein said source of radiation is a mercury arc lamp.

16. (Original) A method as in claim 15 wherein said photocathode is cesium telluride.

17. (Canceled)

18. (Previously Amended) A method as in claim 13 wherein said spatial light modulator is a micromirror array.

19. (Currently Amended) A method of performing lithography with multiple beams of electrons comprising:

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- a) directing radiation onto a spatial light modulator, thereby modulating said radiation, the spatial light modulator being configured to alter radiation modulation characteristics thereof in response to computer control;
 - b) directing said modulated radiation onto a photocathode thereby simultaneously producing a plurality of electron beams as result of said modulation of the radiation by the spatial light modulator, said computer-controlled modulation of the radiation by the spatial light modulator controls the pattern of electron beams emitted by the photocathode; and
 - c) directing said plurality of electron beams onto an acceptance region of an electron beam optical column, producing thereby a plurality of electron beams impacting a target located at the target end of said electron beam optical column.
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20. (Original) A method as in claim 19 wherein said radiation is uv radiation.

21. (Original) A method as in claim 20 wherein said source of radiation is a mercury arc lamp.

22. (Original) A method as in claim 21 wherein said photocathode is cesium telluride.

23. (Canceled)

24. (Previously Amended) A method as in claim 19 wherein said spatial light modulator is a micromirror array.